

The Quantum Reconstruction Program and Beyond

What it Is, Why it Matters, Where Next?

August 1-3, 2023

University of Graz, Austria

Organizing Team: Philipp Berghofer & Philip Goyal

Venue: HS 05.12, Universitätsplatz 5

August 1

- 09.15 Opening Address (Philipp Berghofer & Philip Goyal)
- 09.30-10.15 **Philipp Berghofer** (University of Graz)
Quantum Reconstruction and Beyond
- 10.15-11.15 **Philip Goyal** (University at Albany, SUNY)
Quantum Reconstruction and Beyond
- 11.15-11.30 Coffee Break
- 11.30-12.30 **Muhammad Hamza Waseem** (University of Oxford) & **Bob Coecke**
(Quantinuum): *Picturing Interpretations of Quantum Physics*
- 12.30-13.30 **Johannes Fankhauser** (University of Oxford): *Quantum Uncertainty as a
Fundamental Limit to Nature's Predictability*
- 13.30-15.00 Lunch
- 15.00-16.00 **Philipp Höhn** (OIST): *TBA*
- 16.00-16.30 Coffee Break
- 16.30-17.30 **David Ellerman** (University of Ljubljana): *A New Information-Theoretic Approach
to Quantum Mechanics*
- 17.30-18.30 **Daniel Shanahan** (Independent Researcher): *Restructuring the de Broglie Wave*
- 19.00 Dinner

August 2

- 10.00-11.00 **Michael Cuffaro** (LMU): *Quantum Mechanics on an Informational (or Neo-Bohrian) Approach*
- 11.00-11.30 Coffee Break
- 11.30-12.30 **Jessica Oddan** (University of Waterloo): *Reconstructions of Quantum Theory: Genuine Explanation and Moderate Realism*
- 12.30-13.30 **Lucy Mason** (KCL): *Quantum versus Classical: Emergence in the Information Framework*
- 13.30-15.00 Lunch
- 15.00-16.00 **Iulian Toader** (University of Vienna): *The Meaning of Reconstructed Quantum Mechanics*
- 16.00-16.30 Coffee Break
- 16.30-17.30 **Stefan Weigert** (University of York): *A Quantum Theory with Non-collapsing Measurements*
- 17.30-18.30 **Yang Yu** (SUNY Albany): *The Structure of Quantum Questions*
- 19.00 Dinner

August 3

- 10.00-11.00 **Michel Bitbol** (École Normale Supérieure): *Reconstructions of Physical Theories as Transcendental Arguments*
- 11.00-11.30 Coffee Break
- 11.30-12.30 **Harald Wiltsche** (Linköping University): *Transcendental Approaches to QM—Lessons from Bohr and Bitbol*

- 12.30-13.30 **Michele Dall'Arno** (TUT): *On the Role of SIC Structures in the Quantum Inferential Process*
- 13.30-15.00 Lunch
- 15.00-16.00 **Ruediger Schack** (RHUL): *From the Quantum Formalism to QBism and back to the Quantum Formalism*
- 16.00-16.30 Coffee Break
- 16.30-17.30 **John DeBroda** (UNM): *Deconstructing Dynamics in QBism*
- 17.30-18.30 **Matt Weiss** (University of Massachusetts Boston): *How Quantum Is QBism?*
- 18.30-19.30 **Markus Müller** (IQOQI): *Quantum Theory as a Principle Theory of Probability and its Relation to Spacetime*
- 19.00: Dinner